

sending a random signal from said lock device to said key device;
encrypting said random signal in said key device using said private key;
returning said encrypted random signal to said lock device;
decrypting said encrypted random signal in said lock device, comparing the result
with said random signal and opening said lock device if a match is obtained.

41. The method according to claim 40, further comprising:
generating tickets from said key device, said tickets having optional limits to
opening said lock device.

42. The method according to claim 41, wherein said limits include number of uses.

43. The method according to claim 41, wherein said limits include time of day.

44. The method according claim 41, wherein said limits include authority to
generate further tickets.

45. The method according to claim 41, further comprising:
providing an electronic control device; and
loading said private key into said key device from said control device.

46. A method of issuing tickets from a key device, comprising:
providing a key device containing a plurality of tickets;
electronically transferring one of said tickets to a ticket holding device;
assigning a unique ticket identifier to said ticket;
assigning optional limits to said ticket;

and digital signing said ticket with a private key of said key device.

47. A method of using tickets issued from a key device to open a lock device, comprising:

broadcasting a service offer from said lock device;

sending a key device identifier stored in said ticket to said lock device;

sending a random number from said lock device to said key device;

encrypting said random number and sending said encrypted random number and said ticket to said lock device;

decrypting said encrypted random number in said lock device and comparing with said random number;

opening said lock device if the comparison is a match.

48. The method according to claim 47, further comprising:

verifying said ticket in said lock device after said comparing and before said opening;

said verifying including decrypting the checksum with a public key; determining the access rights of the grantor; and determining the derivative level of the ticket.